

Descriptive Summary of the Changes in the Gulf of Maine, May 23, 1985, to May 26, 1992

Forested lands dominated the landscape of the Gulf of Maine with over 470,000 acres (approximately 43 percent of the land) covered by evergreen, mixed, and deciduous forests in 1992. In the State of Maine, silviculture is a major economic industry. In this portion of Maine, nearly 25,000 acres of land appeared to be involved in the silviculture industry.

Evergreen farming is a monoculture farming practice common to the Northeast region of the United States. This process was clearly illustrated by the initial change of evergreen forest to bare land following the clearing of a forest, after which grasses colonized the area, transforming the land cover to grassland. Finally, after the reforestation of seedlings, this grassland started to develop into scrub/shrub, eventually reverting back to mature evergreen forest.

By analyzing the changes that occurred to the landscape between 1985 and 1992, it was evident that 20,000 acres of forest were converted to scrub/shrub, 1,700 acres of forest were cleared to grasslands, the grasslands grew to scrub/shrub, and more than 3,300 acres of scrub/shrub returned to mature forests. A unique aspect of this region's change was that it was uncommon for land in silviculture to be influenced by development, thus loss of forest to development was not a significant source of change.

Below are three tables. The first two tables contain a data summary for the time 1 and time 2 images. These images were used to create the change image and their tables include; land cover classes, the number of pixels present in each class, and their corresponding values in acres.

The third table is a complete change matrix for time 1 and time 2 images and includes a smaller, generalized table, which groups similar classes together. Table three compares each class from time 1 to time 2 and illustrates the change that took place between classes. The table presents the total acres for each class, the total percent that each class represents, the total acres that changed, and the percent of change they represent.

Tabular Summary: Gulf of Maine, Maine, May 23, 1985

	CLASS	PIXELS	ACRES	PERCENT
1	Unclassified	0	0	0.00%
2	High Intensity Developed	43457	9665	0.87%
3	Low Intensity Developed	34838	7748	0.70%
4	Cultivated Land	37505	8341	0.75%
5	Grassland	117578	26149	2.36%
6	Deciduous Forest	190452	42355	3.82%
7	Evergreen Forest	513800	114266	10.32%
8	Mixed Forest	1510091	335835	30.32%
9	Scrub/Shrub	637336	141740	12.80%
10	Palustrine Forested Wetland	208852	46447	4.19%
11	Palustrine Scrub/Shrub Wetland	264577	58840	5.31%
12	Palustrine Emergent Wetland	65652	14601	1.32%
13	Estuarine Forested Wetland	0	0	0.00%
14	Estuarine Scrub/Shrub Wetland	0	0	0.00%
15	Estuarine Emergent Wetland	6961	1548	0.14%
16	Unconsolidated Shore	53322	11858	1.07%
17	Bare Land	4370	972	0.09%
18	Water	1291163	287147	25.93%
19	Palustrine Aquatic Bed	0	0	0.00%
20	Estuarine Aquatic Bed	0	0	0.00%
21	Tundra	0	0	0.00%
22	Snow/Ice	0	0	0.00%
	TOTALS	4979954	1107512	100.00%

Tabular Summary: Gulf of Maine, Maine, May 26, 1992

	CLASS	PIXELS	ACRES	PERCENT
1	Unclassified	0	0	0.00%
2	High Intensity Developed	44615	9922	0.90%
3	Low Intensity Developed	35314	7854	0.71%
4	Cultivated Land	38105	8474	0.77%
5	Grassland	122937	27340	2.47%
6	Deciduous Forest	191091	42497	3.84%
7	Evergreen Forest	466619	103773	9.37%
8	Mixed Forest	1470527	327036	29.53%
9	Scrub/Shrub	715093	159032	14.36%
10	Palustrine Forested Wetland	209354	46559	4.20%
11	Palustrine Scrub/Shrub Wetl	262492	58377	5.27%
12	Palustrine Emergent Wetland	65813	14636	1.32%
13	Estuarine Forested Wetland	0	0	0.00%
14	Estuarine Scrub/Shrub Wetlands	0	0	0.00%
15	Estuarine Emergent Wetland	7028	1563	0.14%
16	Unconsolidated Shore	53818	11969	1.08%
17	Bare Land	4571	1017	0.09%
18	Water	1292577	287461	25.96%
19	Paulstrine Aquatic Bed	0	0	0.00%
20	Estuarine Aquatic Bed	0	0	0.00%
21	Tundra	0	0	0.00%
22	Snow/Ice	0	0	0.00%
	TOTALS	4979954	1107512	100.00%

Change Matrix and Tabular Summary: Gulf of Maine, ME, from May 23, 1985 to May 26, 1992

	FROM / TO	High Intensity Developed	Low Intensity Developed	Cultivated Land	Grassland	Deciduous Forest	Evergreen Forest	Mixed Forest	Scrub/Shrub	Palustrine Forested Wetland	Palustrine Scrub/Shrub Wetland	Palustrine Emergent Wetland	Estuarine Forested Wetland	Estuarine Scrub/Shrub Wetland	Estuarine Emergent Wetland	Unconsolidated Shore	Bare Land	Water	Palustrine Aquatic Bed	Estuarine Aquatic Bed	Tundra	Snow/Ice	Total Acres	Changed
2	High Intensity Developed	9617	4	1	1	2	0	0	35	0	0	1	0	0	0	2	2	0	0	0	0	0	9665	High Intensity Developed
3	Low Intensity Developed	3	7704	1	6	1	0	3	23	0	3	1	0	0	0	0	1	1	0	0	0	0	7748	Low Intensity Developed
4	Cultivated Land	6	2	7817	163	8	0	30	294	2	1	4	0	0	0	2	0	11	0	0	0	0	8341	Cultivated Land
5	Grassland	51	54	136	25032	42	0	46	690	6	36	30	0	0	3	6	9	6	0	0	0	0	26149	Grassland
6	Deciduous Forest	9	13	59	75	40878	0	866	413	15	10	11	0	0	1	3	1	3	0	0	0	0	42355	Deciduous Forest
7	Evergreen Forest	106	9	167	525	89	103764	452	9121	4	14	10	0	0	1	1	3	0	0	0	0	0	114266	Evergreen Forest
8	Mixed Forest	91	17	114	1156	346	1	323514	10504	13	42	19	0	0	0	2	14	2	0	0	0	0	335835	Mixed Forest
9	Scrub/Shrub	26	23	170	325	1129	0	2103	137688	59	153	26	0	0	3	8	15	12	0	0	0	0	141740	Scrub/Shrub
10	Palustrine Forested Wetland	1	0	0	1	0	0	5	44	46388	6	2	0	0	0	0	0	0	0	0	0	0	46447	Palustrine Forested Wetland
11	Palustrine Scrub/Shrub Wetland	0	3	2	13	0	0	6	170	49	57890	284	0	0	6	15	5	396	0	0	0	0	58840	Palustrine Scrub/Shrub Wetland
12	Palustrine Emergent Wetland	1	24	2	8	1	0	3	20	21	107	13920	0	0	7	24	5	460	0	0	0	0	14601	Palustrine Emergent Wetland
13	Estuarine Forested Wetland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Estuarine Forested Wetland
14	Estaurine Scrub/Shrub Wetland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Estaurine Scrub/Shrub Wetland
15	Estuarine Emergent Wetland	1	0	0	0	0	0	3	2	0	6	1	0	0	1523	1	1	9	0	0	0	0	1548	Estuarine Emergent Wetland
16	Unconsolidated Shore	3	0	2	6	0	4	4	6	0	1	6	0	0	10	11797	11	8	0	0	0	0	11859	Unconsolidated Shore
17	Bare Land	6	2	3	22	0	0	1	8	0	1	2	0	0	1	11	907	8	0	0	0	0	972	Bare Land
18	Water	3	0	0	7	0	3	1	13	2	106	321	0	0	7	99	42	286543	0	0	0	0	287147	Water
19	Palustrine Aquatic Bed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Palustrine Aquatic Bed
20	Estuarine Aquatic Bed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Estuarine Aquatic Bed
21	Tundra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Tundra
22	Snow/Ice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Snow/Ice
Total Acres		9,922	7,854	8,474	27,340	42,497	103,773	327,036	159,032	46,559	58,377	14,636	-	-	1,563	11,969	1,017	287,461	-	-	-	-	820968	Total Acres
Percent		1.21%	0.96%	1.03%	3.33%	5.18%	12.64%	39.84%	19.37%	5.67%	7.11%	1.78%	0.00%	0.00%	0.19%	1.46%	0.12%	35.01%	0.00%	0.00%	0.00%	0.00%		Percent
Changed 1985-1995		258	106	133	1,192	142	-10,493	-8,799	17,293	112	-464	36	0	0	15	110	45	314	0	0	0	0	0	Total Acres that Changed
Percent Change		2.66%	1.37%	1.60%	4.56%	0.34%	-9.18%	-2.62%	12.20%	0.24%	-0.79%	0.25%	#DIV/0!	#DIV/0!	0.96%	0.93%	4.60%	0.11%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		Percent Change

FROM / TO	Developed	Cultivated	Grassland	Forested	Scrub/Shrub	Wetlands	Bare	Water	Total Acres	Changed	
Developed	17,326	2	7	6	62	5	6	2	17,416	90	Developed
Cultivated	8	7,817	163	40	296	7	2	11	8,344	526	Cultivated
Grassland	105	136	25,032	94	726	75	15	6	26,191	1,159	Grassland
Forested	246	340	1,757	516,334	20,154	140	24	5	538,999	22,665	Forested
Scrub/Shrub	52	172	338	3,347	195,901	428	43	409	200,688	4,787	Scrub/Shrub
Wetlands	30	5	22	18	236	120,210	50	866	121,436	1,227	Wetlands
Bare	10	4	28	10	17	21	12,725	17	12,833	108	Bare
Water	3	0	22	6	119	435	141	286,543	287,269	726	Water
Total Acres	17,780	8,477	27,370	519,856	217,510	121,321	13,005	287,858	820,968	31,288	Total Acres
Percent of Total (Y2/Total)	2.17%	1.03%	3.33%	63.32%	26.49%	14.78%	1.58%	35.06%		3.81%	
Total Change (Y2-Y1)	364	133	1179	-19143	16822	-115	172	589		31288	
Percent Change	2.09%	1.60%	4.50%	-3.55%	8.38%	-0.09%	1.34%	0.20%		3.81%	